



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/456,371	12/08/1999	HEINRICH BOLLMANN	12010	6395
28484	7590	09/25/2006	EXAMINER	
BASF AKTIENGESELLSCHAFT CARL-BOSCH STRASSE 38, 67056 LUDWIGSHAFEN LUDWIGSHAFEN, 69056 GERMANY			CHANG, VICTOR S	
			ART UNIT	PAPER NUMBER
			1771	

DATE MAILED: 09/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/456,371	BOLLMANN ET AL.	
	Examiner	Art Unit	
	Victor S. Chang	1771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 23 February 2006.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 19,20,22,23 and 30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 19,20,22,23 and 30 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____. | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____. |

DETAILED ACTION

Introduction

1. The Examiner has carefully considered Applicants' amendments and remarks filed on 2/23/2006. Applicants' amendment to claim 19 has been entered.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. Rejections not maintained are withdrawn.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.
5. Claim 23 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

More particularly, the Examiner repeats (see Office action mailed 9/28/2005, page 3) that nowhere in the original specification is there a support for the structural limitation "elastomer layer is bonded to an outer surface of said molding", and appears

to be a new matter. Applicants are required to either point out a clear support, or cancel the new matter.

With respect to Applicants' argument "... the composite damping element is formed a microcellular polyurethane elastomer layer that is produced in direct contact with a thermoplastic polyurethane (TPU) molding, as described in the examples, see page 10, lines 14-18" (Remarks, page 4), the Examine notes that while the passage pointed out by Applicants describe a general molding process, nowhere is there a description relating the structural limitation "elastomer layer is bonded to an outer surface of said molding". In particular, at page 10, lines 30-31, the disclosure "The composite elements consisting of two TPU specimens which had been adhesive-bonded by microcellular polyurethane ..." clearly shows the elastomer is bonded to an inner surface of TPU molding. Applicants' argument to the contrary is not well taken.

Additionally, Applicants' arguments "... the specification as originally filed has implicit support for any orientation, including the elastomer layer bonded to an outer or inner surface of the molding ..." and "... Exhibit A illustrates numerous prior art damping elements Figure 5.46 ... illustrates ... rubber on an inner face of one metal plate and an outer face of another metal plate ..." have also been carefully considered, but are not persuasive. The Examiner notes that the original specification clearly lacks any express disclosure of an embodiment which comprises the structural limitation "elastomer layer is bonded to an outer surface of said molding", nor such an embodiment being contemplated at the time the invention was made.

Rejections Based on Prior Art

6. Claims 19, 20 and 22 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Renzo (Derwent abstract of FR 2559862A).

First, for the purpose of clarity, the Examiner repeats the relied upon prior art as follows: Renzo teaches a composite shock absorber comprises a compressible elastic profile (51), with a cellular material confined within or between bellows (50) of flexible impermeable material. The bellows (50) is a blow molded profile of thermoplastic polyurethane (TPU) resin, and the cellular material is an expanded polyurethane developed within and bonded to the internal face of (50) so that the foam density or density distribution produces the overall dynamic compression/stiffness curve required. Optionally, the bellows may have a divergent profile with a foam-filled core. The composite shock absorber is used for vehicle suspension systems in conjunction with a coaxial telescopic piston (2), to eliminate the need to assemble separate shock absorbing elements and protective impermeable gaiters (51) serving as the latter. It is suitable for large compression amplitudes than solid elastic dampers. Also it eliminates the need for a metal cap to confine lateral expansion.

Second, it is noted that independent claim 19 has been amended to recite, inter alia, "... a rigid thermoplastic polyurethane molding ... a flexible microcellular polyurethane elastomer ... while supported by said rigid thermoplastic polyurethane molding." In response to the amendment, the Examiner notes that, in the absence express definitions for the terms "rigid" and "flexible", Fig. 5 of Renzo clearly shows that

the solid TPU bellows (50) and microcellular foam, which is bonded to the internal face of (50) anticipate the relative terms “rigid” and “flexible” as claimed, because “rigid” and “flexible” are relative terms, and a solid polyurethane is inherently more “rigid” than a “flexible” microcellular polyurethane. As to the term “supported by”, it is also again clearly anticipated by Renzo, as Fig. 5 clearly shows that the microcellular foam is stacked and attached (supported) to the bellows (50).

With respect to Applicants’ argument “Renzo … discloses a composite shock absorber … Figure 6 … the shock absorber is shown in a compressed state … the polyurethane bellow 50 is also compressed. Accordingly, Renzo does not disclose a rigid thermoplastic polyurethane”, the Examiner repeats that in the absence express definitions for the terms “rigid” and “flexible”, Fig. 5 of Renzo clearly shows that the solid TPU bellows (50) and microcellular foam, which is bonded to the internal face of (50) anticipate the relative terms “rigid” and “flexible” as claimed, as set forth above. More particularly, Applicants appear to argue that a “rigid” TPU molding is “non-compressible”, which would clearly render the microcellular polyurethane elastomer of instant invention as non-functional, because it would not have provided any shock absorbing functions if the “rigid” TPU molding is non-compressible. The Examiner asserts that the compressed bellows in Fig. 6 has no relevance to the bellows being “rigid” or “flexible”, Applicants’ argument is clearly without basis (no definition) and misplaced.

Similarly, with respect to Applicants’ argument “… The prior art rubber-metal composite used in the shock-absorber and the rubber portion positioned to absorb and

dampen vibrations received by the shock-absorber. The *rigid* thermoplastic polyurethane molding has replaced the metal component and the *flexible* microcellular layer has replaced the rubber component ...” (Remarks, pages 6-7, bridging paragraph), the Examiner notes that Applicants appear to have admitted that the metal component must transmit the shock to shock-absorbing component (i.e., rubber or microcellular polyurethane), which inherently requires the “rigid” metal component being deformed in a compressed state. Applicants’ argument bears no merit to differentiate the relative terms “rigid” and “flexible”.

Conclusion

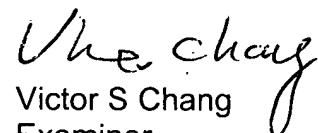
7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Victor S. Chang whose telephone number is 571-272-1474. The examiner can normally be reached on 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel H. Morris can be reached on 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Victor S Chang
Examiner
Art Unit 1771

4/28/2006